

REMARKS

There are now pending in this application Claims 1-9, the independent claims being Claims 1, 3-6, 8, and 9. Claims 1-9 have been amended. No new matter has been added.

In the Official Action dated March 28, 2003, Claims 1-6, 8 and 9 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 6,015,202 (Hiramatsu, et al.). Claim 7 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Hiramatsu, et al. as applied to Claim 6 and further in view of U.S. Patent No. 4,498,665 (Watanabe).

Reconsideration and withdrawal of these rejections are respectfully requested in view of the above amendments and the following remarks.

The present invention as recited in the independent claims relates to the novel features of exciting a predetermined phase winding among the plural phases of the stepping motor for a predetermined time period without driving and rotating the stepping motor, when a power supply of equipment in which the motor driving apparatus is contained is turned on (Claims 1, 3-6, 8, and 9) and when the positional relationship between a rotor and stator of the motor deviates from a positional relationship determined by the excitation of the predetermined phase winding for the predetermined time period, by an external force, before rotation of the motor is started (Claims 1, and 3-6).

The Hiramatsu, et al. patent relates to a recording apparatus that uses a stepping motor and switching of phases to be excited. However the Hiramatsu patent fails to disclose or suggest the above-referenced features of the present invention. In particular, Hiramatsu fails to disclose or suggest exciting a predetermined phase winding among the plural phases of the stepping motor for a predetermined time period without driving and rotating the stepping motor, when a power supply of equipment in which the motor driving apparatus is

contained is turned on and when the positional relationship between a rotor and stator of the motor deviates from a positional relationship determined by the excitation of the predetermined phase winding for the predetermined time period, by an external force, before rotation of the motor is started, as disclosed and claimed in the present application.

In the Hiramatsu patent, the excitation is performed so as to rotate the stepping motor, not to prevent the out-of-phase operation of the motor. Moreover, Hiramatsu fails to disclose that the relative position between the rotor and the stator of the stepping motor can be a predetermined condition when starting the stepping motor so that the out-of-phase operation of the motor can be prevented.

The Watanabe patent relates to the opening and closing of a door of an image forming apparatus. However, that patent does not disclose or suggest the above-mentioned features of the present invention. In particular, the Watanabe patent fails to disclose or suggest exciting a predetermined phase winding among the plural phases of the stepping motor for a predetermined time period without driving and rotating the stepping motor, when a power supply of equipment in which the motor driving apparatus is contained is turned on and when the positional relationship between a rotor and stator of the motor deviates from a positional relationship determined by the excitation of the predetermined phase winding for the predetermined time period, by an external force, before rotation of the motor is started, as disclosed and claimed in the present application.

As such, Watanabe does not disclose that the relative position between the rotor and the stator of the stepping motor is a predetermined condition in accordance with the turning-on or opening/closing of the image forming apparatus.

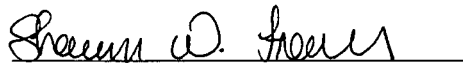
For the foregoing reasons, Applicants submit that the present invention, as recited in independent claims 1, 3-6, 8, and 9, is patentably defined over the cited art, whether that art is taken individually or in combination.

The dependent claims also should be deemed allowable, in their own right, for defining other patentable features of the present invention in addition to those recited in their respective independent claims. Individual consideration of these dependent claims is requested.

Applicants further submit that the instant application is in condition for allowance. Favorable reconsideration, withdrawal of the rejections set forth in the above-noted Official Action and an early Notice of Allowance are requested.

Applicants' undersigned attorney may be reached in our Washington, D.C. office by telephone at (202) 530-1010. All correspondence should continue to be directed to our below listed address.

Respectfully submitted,


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